

Claims

1. An apparatus for removing bones from a fish fillet, said bones being primarily located in an area along a line corresponding to the spine of the fish, said apparatus comprising:

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- a supporting frame,

- a conveyor arranged on said frame for conveying the fish fillet,

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- a first supporting means arranged on said conveyor for supporting the fish fillet as it is being conveyed by means of imposing the fish fillet on it so that the bones to be removed are exposed,

- a bone removal unit arranged on said frame in an area above the conveying means,

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- a second supporting means arranged sidewise to said first supporting means, and

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- means for providing an attractive force between said first- and said second supporting means,

- said first- and second supporting means further defining a gap there in-between enveloping at least portion of the fish fillet and maintaining the same in fixed position during the bone removal process,

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- said gap representing the fillet thickness at a particular area and thereby providing guidance for positioning of said bone removal unit .

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2. An apparatus according to claim 1, wherein said first supporting means is a plurality of triangular formed units arranged parallel along the entire conveyor with one side perpendicular to the conveyor.
- 5 3. An apparatus according to claim 1 or 2, wherein said second supporting means is at least one member positioned in a proximity to the upper part of said first supporting means such that in a rest position one side of said beam is arranged parallel to said perpendicular side along the conveyor.
- 10 4. An apparatus according to any of the preceding claims, wherein the number of beams is two and are sidewise arranged along the conveyor.
5. An apparatus according to any of the preceding claims, further comprising means for defining the depth of said gap in correspondence with the width of said  
15 gap.
6. An apparatus according to any of the preceding claims, wherein said means for defining the depth of said gap is a plurality of rotatable beams with one end mounted to an axel on said second supporting means or adjacent to said second  
20 supporting means and the other end facing the perpendicular side of the first supporting means such that the second end of the beam is displaced upwards and downwards as said gap is extended or contracted, thereby moving the bottom of said gap downwards and upwards.
- 25 7. An apparatus according to any of the preceding claims, wherein said beam has a wing formed cross sectional shape with the broader end mounted to the second supporting means and the narrower end facing the perpendicular side of the first supporting means.

8. An apparatus according to any of the preceding claims, wherein the movement of said bone-removal unit comprises two and/or three-dimensional movement with the aim of covering said area along the line corresponding to the spine of the fish.

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9. An apparatus according to any of the preceding claims, wherein the gap size defines the movement of said bone-removal unit.

10. An apparatus according to any of the preceding claims, wherein the bone-removal unit comprises a rotatably driven axel with an engagement element and a counter pressure element.

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11. A method for removal bones from a fish fillet, said bones being primarily located in an area along a line corresponding to the spine of the fish, said

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method comprising:

- positioning the fish fillet on a first supporting means in a way so that the bones to be removed are exposed and subsequently conveying the fish fillet,
- providing a second supporting means arranged sidewise to said first supporting means,
- maintaining the fish fillet in a steady position between said first and said second supporting means while it is conveyed, and
- removal said exposed bones by means of bringing a bone removal unit in contact with the surface of said steady fish fillet in the exposed area where the bones are primarily located in.

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